QUÉBEC POLICY

ON UNIVERSITIES

PRIORITIES FOR *our future*

Québec

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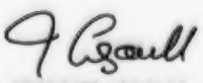
The twenty-first century poses immense personal, cultural, social, economic and political challenges. The best way to ensure Québec's place among the most advanced societies in the future is to provide solid support for the education of young people and adults and for research. This is the surest way to enhance Quebecers' creativity, capacity for innovation and initiative and their openness to the world.

Through its policy on universities, the government seeks to affirm their importance as educational institutions and vehicles for the development of tomorrow's Québec. In a rapidly changing world, they play a crucial role in Québec society.

The policy on universities addresses the main issues currently being discussed on the international scene: accessibility, performance in terms of quality and efficiency, and the universities' response to the needs of society. Thus, while adapted to Québec's specific context and characteristics, the policy reflects the preoccupations of the governments of all countries regarding higher education.

By working together with a common will, the government, the members of the university community and their social partners will strengthen Québec society and help Québec take its rightful place on the international scene. I am convinced that our shared commitment is the best guarantee for a better future.



FRANÇOIS LEGAULT
Minister of State for Education and Youth

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INTRODUCTION

The university is one of the most important institutions in contemporary Québec. It plays a pivotal role in the development of many of the capabilities that are shaping Québec's identity. It offers all of society social, cultural and economic benefits. Indeed, the major government funding it receives shows that it is considered a public service.

Over the past 30 years, Québec universities, like those in other industrialized countries, have experienced massive growth in enrolment. They have confronted the challenges of modern society and fulfilled many of the aspirations of the Quiet Revolution. They have contributed a great deal to present-day Québec. Now, at the outset of the new millennium, their role is more important than ever, for not only must they maintain their momentum, but they must also find renewed vigour in order to help pave the way for the knowledge society.

This is Québec's first policy statement on universities. It is part of a social perspective that sees education as a vehicle for personal and social achievement. By issuing this policy statement, Québec affirms yet again its role in this key area of human and social development. But the significance of the policy is greater still, for viewed in terms of society as a whole, the university has a strategic role to play in positioning Québec within a changing world: universities stimulate our economic, social and cultural development. It follows that an investment in our universities is an investment in the future of our society. That is the conviction on which this policy statement is based.

Québec needs universities that excel. We must take steps to ensure that Québec society has universities that compare favourably with similar institutions elsewhere, particularly in North America. The stakes are high, for we are competing with those universities for the best researchers and students. This competition also concerns intellectual influence. Our universities must extend the frontiers of learning and contribute to the world's collective knowledge. At the same time, they must be well integrated into their community and must meet the needs of a modern society.

Action must also be taken to ensure that our students have access to teaching of a high quality and research activities of international calibre, which lead to career opportunities corresponding to their aspirations and abilities and to the needs of society.

The publication of this policy statement provides an opportunity to identify issues related to the university as an institution in the present context and to develop new perspectives on the future, while establishing the framework within which the government and the universities will work over the next few years to implement the orientations established.

The policy will be applied in the spirit of cooperation that has traditionally marked the development of our university system.

The policy has three objectives:

- To reaffirm the importance of the universities for the development of individuals and of Québec society in the context of the changes now under way.
- To make known the orientations of government action concerning the universities. These orientations are accompanied by priorities and measures.
- To establish a frame of reference for the government's commitments and expectations concerning the universities. These are the major orientations that will guide government and university action in the near future. The government will also follow these orientations in its distribution of available resources.

With respect to resources, two further documents will supplement this policy statement: a funding policy designed to correct the problems identified in the current model and a reinvestment plan for the next few years.

In addition, the Ministère de la Recherche, de la Science et de la Technologie is preparing a policy on science. The orientations and priorities for government action of the policy on universities and the policy on science will, of necessity, be made consistent in areas of common concern.

The university community, the government and society as a whole must make a concerted effort to attain the proposed objectives of this policy. In the final analysis, it is to everyone's advantage to do so, because it will make Québec more dynamic, more creative and more prosperous.

1

THE NEED FOR A POLICY ON *universities*

1 THE NEED FOR A POLICY ON UNIVERSITIES

1.1 THE ISSUES

The university is an evolving institution. Throughout its history, it has adapted to the economic, social, political and cultural circumstances of its time. In the early twentieth century, the university took a major step forward: it became a modern institution, contributing to the development of society by opening wide the doors to knowledge. In the second half of the century, with the emergence of mass education, the university was democratized. As we enter the twenty-first century, the globalization of the economy, the interdependence of economic development and scientific and technological progress, growing demands regarding research, and the importance of the university in the social fabric dictate serious consideration of the role of the university.

Indeed, in the past decade, a number of advanced countries have undertaken to reform their universities.[1] Concerted reflection has led to a consensus in favour of maintaining higher education as a public service and continuing to provide state support, notwithstanding the public finance crisis. There is also unanimity regarding the university's basic mission: teaching and research. Everywhere, accessibility, quality and performance remain central concerns. In all countries, scarcer resources make optimal resource utilization imperative, and all agree that the universities need to adapt more harmoniously to the needs of society.

In this context, relations between universities, the state, society and the private sector are evolving towards a greater reliance on partnership. Many observers are expressing expectations concerning the emergence of a new culture of management characterized by more stringent standards of responsibility, transparency and accountability.

1. UNESCO. *Higher Education in the Twenty-first Century: Vision and Action* (World Conference on Higher Education, Paris, October 5-9, 1998).

It is in these global conditions that we must develop a framework for action to help Québec universities meet the challenges they face in the coming period. For this reason, a policy on universities is essential.

1.2 BACKGROUND

The Parent Report, which was published in the 1960s, was the first orientation document on education in Québec. It laid the foundations for the present system, and also marked the beginning of structured state intervention in education. The Ministère de l'Éducation was founded in 1964.

The Parent Report defined the place and the specific role of the universities in the education system. It considered the various aspects of their activity, proposing an organized system of university studies following the thirteenth year of schooling, structuring the system from bachelor's degree to doctorate, and redefining the degrees, as well as setting up independent bodies to provide liaison between the government and the universities. These bodies are the Office pour le développement de l'enseignement supérieur, the Conseil provincial de la recherche and the Commission de l'enseignement supérieur of the Conseil supérieur de l'éducation.

Based on the principle of the democratization of higher education, the proposed reforms were designed primarily to enable the Québec population to catch up in the area of schooling. In the demographic context of rapid growth that characterized the period, the most immediate challenge was to make university education accessible to much larger numbers of students.

The two principal means adopted were the creation of new institutions and a policy on tuition fees and financial aid, which improved both geographic and financial accessibility. Although the report stressed that free education was desirable in the long term, it recommended that tuition fees be maintained at the university level. This recommendation reflected the

government's limited financial resources and the resulting impossibility of providing free education at all levels.

The Parent Report also defined the main principles that were to govern relations between the universities and the government. The state was responsible for ensuring equal access to education, providing student aid and doing the forecasting, organization, planning and coordination required by the system. The universities were responsible for education and research; they were to exercise a social role and act in the public interest, and they had the autonomy required to do so.

The 1970s and early 1980s saw the development of the university system: the Université du Québec and its components were established and enrolments grew considerably. A major boost to research was given by the adoption in 1983 of the Act to promote the advancement of science and technology in Québec, which set up the Fonds pour la formation de chercheurs et l'aide à la recherche.

The 1980s were marked by important policy statements on elementary, secondary and college education and on cultural, scientific and economic development. These policies underscored, each in its own way, the essential contribution of the university in these major areas of society. In addition to its educational and cultural mission, the university was increasingly expected to play a role in the development of society. With respect to university research, in addition to major efforts to encourage basic research, the 1980s saw the emergence of measures to reinforce synergy and partnership between the universities and business.

The late 1970s and the early 1980s were also the beginning of a difficult economic period and a crisis of public finances. The universities experienced budget cuts. The challenge facing the government was to define ways for the universities to fulfill their mission that took into account the state's financial situation. While resources were limited, new needs were appearing, which had to be dealt with.

In this connection, the parliamentary commissions on the funding of the universities, which were held in 1984 and 1985, discussed subjects such as the consolidation of undergraduate education and the rationalization of programs; the development of the master's and doctoral levels and of research; accessibility, in the context of the objectives adopted with regard to the social context; the development of sectors with strong potential for the future; the improvement of the quality of teaching and research; more effective and rational management of resources; and finally, the need for the universities to become more accountable. These are all issues of continuing relevance today.

All these debates underscore the difficulty of combining efforts to achieve greater accessibility and improvements in the university system on the one hand, and the rational utilization of the available resources on the other. The 1990s have demonstrated that this problem has not been solved, and that it is at the heart of the delicate balance that must be maintained between the responsibilities of the government and those of the universities.

As we begin the year 2000, we must admit that the universities have made great strides in the 35 years since the first wave of educational reforms. They have attained the main objectives that we as a society set for them regarding democratization, the development of education and excellence in research.

Thus, the increase in enrolment has greatly exceeded the projections of the Parent Report. Full- and part-time enrolments rose from 47 304 in 1960 to 224 592 in 1998. In 1998, more than 50 000 degrees, certificates and diplomas were granted—28 894 bachelor's degrees, 6 514 master's degrees, 1 143 doctorates and 16 726 certificates and diplomas. These results signify that the access of young people in Québec to university diplomas now equals the average for developed countries.

The number of full-time professors increased from 2 350 to 8 144 between 1960 and 1998. Research activities have multiplied and produced excellent results, thanks in part to government grants and fiscal measures to support research and development. By way of example, between 1980 and 1990, the share of Québec researchers in funding from federal research organizations increased from 22 percent to 28 percent, which is superior to Québec's demographic weight in Canada. Grants and research contracts rose from $141 million to $605 million between 1980 and 1998, and enrolment and graduation rates in master's and doctoral programs also increased.

Québec has not stinted in its support for education, particularly university-level teaching and research: in 1998-99, for example, spending on universities amounted to $2.9 billion—an estimated 1.49 percent of Québec's gross domestic product—which is higher than the Canadian average of 1.28 percent.

Finally, by preparing thousands of students for active working lives, and by playing a major role in Québec's intellectual and scientific life, the universities have made an important contribution to the modernization of our society. Now the foundation of our university system is well established, and knowledge is more than ever the linchpin of our development.

1.3 ELEMENTS OF THE CONTEXT

As usual when one of society's major institutions is to be renewed, the context must be taken into account. In this case, certain aspects of the context explain the need for a policy on universities.

- The numerous pressures put on the universities by various stakeholders and the resulting, sometimes contradictory, tensions regarding the fulfilment of their mission.

- The rapid development of a knowledge-based society. Creativity in all areas of human activity has led to a knowledge society, in which universities naturally have a major strategic role to play. They confront new issues and new challenges. Their key role with respect to creativity and the revitalization of knowledge will be recognized in the policy on science that the Ministère de la Recherche, de la Science et de la Technologie is preparing in collaboration with the Ministère de l'Éducation.

- The need to protect access to university education. Over the past 30 years, the universities have experienced major development, and there has been a considerable increase in access to post-secondary education. However, this achievement is under pressure, which is a matter of serious concern at a time when the knowledge society requires more and more highly qualified personnel.

- A context conducive to reinvestment in higher education, but also a social and demographic context that calls, more than ever before, for sound use of resources. Reinvestment in higher education is one of the means at our disposal to meet the challenges of the knowledge society. The universities will receive core funding to enable them to fulfill their mission, in keeping with their specific characteristics. Beyond this level, they may receive further support to help them rationalize their activities and meet the emerging needs of society.

- Throughout this process, there will be enormous pressure on public finances from other spheres of activity under government responsibility, particularly the health sector. The universities' funding needs will thus have to be considered in terms of the overall picture, without exceeding our means.

2

PRINCIPLES OF ACTION AND *orientations*

2 PRINCIPLES OF ACTION AND ORIENTATIONS

2.1 PRINCIPLES OF ACTION

Government support for universities constitutes a fundamental strategic investment in the future of Québec society. By joining forces, the government and the universities can create a context that favours individual development and the growth of knowledge and the comprehensive education of students who will later contribute to the development of society and to social, cultural and economic innovation. In other words, collaboration between the government and the universities benefits both individuals and society.

The government's orientations are based on recognition of the pivotal role the universities play in human development, especially that of students, and the development of knowledge, culture and society. The university, as an institution of higher learning, dedicated to both the personal and professional education of students, constitutes a public service and contributes to the fulfilment of the government's educational mission. This recognition provides the rationale for government support for universities.

The principles underlying government and university action are as follows:

- The government considers the university an essential public service. In consequence, it seeks to ensure an environment that helps the university perform its role. Transparency and fairness guide the government's decisions in this regard.

- The university plays a fundamental role in society. It maintains, transmits and renews knowledge and culture. It also performs an important critical function. Through its resources and its action, it contributes directly to the development of individuals and society. By interacting with the community, in keeping with its mission, it places its unique resources at the service of society.

- Education, higher education and especially university education constitute an individual and social asset. They must remain accessible to all persons with the aptitude and the desire to learn.

- Through its teaching and research activities, the university fulfills its social responsibility to offer higher education. In doing so, it is attuned to the needs of society and seeks to fulfill them.

- The universities receive funding from the state. They must demonstrate efficient organization by using in an optimal manner the resources provided and by making those resources available to the communities they serve.

- The quality of teaching and research is the first guarantee of the value of any individual or collective investment in university education.

- The university retains its autonomy and power of initiative in the organization of its activities. This principle ensures that the university has the freedom it needs in order to perform its educational and research activities and fulfill its critical function.

- The university is accountable to society and the public authorites for the management of the public funds it receives, the main orientations of its development and the results obtained.

2.2 ORIENTATIONS

The elements of the context and the principles of action stated above are essential. They determine the priorities regarding the following orientations:

- access to university education;
- the universities' performance: the quality of teaching, the excellence of research and the overall efficiency of the system;
- the universities' response to the needs of society and openness to the world.

3

ACCESS TO UNIVERSITY *education*

3 ACCESS TO UNIVERSITY EDUCATION

The future of Québec society—its cultural, social and economic development—depends in large measure on the quality of the education its citizens receive. The knowledge-based society, innovation and global competition all require education of a high quality.

Access to university has always been, and remains a key issue. That is why we established a student financial assistance program, based on meeting students' needs, and created the Université du Québec network in the late 1960s, to improve geographical access to university education.

In the present context, it is equally necessary to take into account the needs of people who choose to attend university. Talented individuals should not only be admitted to university-level studies, but should also complete them. Successful completion of a program of study, recognized by the granting of a degree, should thus be a major focus of any strategy concerning access to university education.

3.1 THE ISSUE

Many factors influence enrolments in university: the labour market, the guidance provided for young people, collective and individual values and aspirations, institutional practices, the demand for retraining and skill updating, the diversity of the services offered by the universities and the territorial distribution of those services, the expenses associated with a university education, etc.

Thus, much of the problem of access to university concerns other factors: demographic factors, of course, but also social and economic factors and the quality of people's earlier education, etc. Since motivation plays an important role in university admission and completion of studies, the quality of the guidance young people receive at school prior to reaching university is crucial. Forecasting models show that the influence of the demographic factor on the evolution of university enrolments will be negligeable over the next few years. It is expected that the population aged 20-29 will fluctuate. After increasing until 2004, the number of young people will decline markedly for the next five years to below the 1999 level; then, it should begin to climb again, coming back up to the 1999 level only in 2014.

Although remarkable progress has been made, the main issue regarding access is maintaining and improving the current level of access to university studies.

According to the most recent *Education Indicators* published by the Ministère de l'Éducation du Québec, the rate of enrolment in programs leading to a bachelor's degree increased from 30.1 percent in 1984-85 to 39.7 percent in 1992-93, and then declined to 33.9 percent in 1997-98.

It is important to pay attention to the decline in the rate of enrolment in programs leading to a bachelor's degree, especially since there will soon be additional pressure on the rate as a result of stricter admission criteria to CEGEPs. In addition, the data on secondary education indicate that the number of graduates has levelled off since the middle of the 1990s.

With regard to programs leading to a master's degree, the enrolment rate increased from 6.8 percent in 1984-85 to 8.7 percent in 1997-98, while the rate for programs leading to a doctorate showed strong growth in this period, increasing from 1.1 percent to 1.9 percent. Despite this progress, Québec has yet to equal the societies with the highest rates of enrolment in master's and doctoral programs.

Overall, access of young Quebecers to university degrees is comparable to the average of member countries of the Organisation for Economic Co-operation and Development (OECD). In 1992, 27.8 percent of young people in Québec could expect to obtain a bachelor's degree in the course of their life, compared

with 27.4 percent in the United States and 27.2 percent in Canada (including Québec).[2] The progress achieved is not necessarily lasting. Indeed, the probability of obtaining a bachelor's degree, which had reached 29 percent in 1996, declined to 28.2 percent in 1997.

Another indicator supports the conviction that public support remains necessary to improve accessibility. The 1996 Canadian census data show that Québec still has the lowest proportion of persons aged 15 and over with university degrees—8 percent, compared with 9.6 percent for Ontario and 8.8 percent for Canada.[3] This is primarily due to the low level of schooling of older people.

These statistics should bolster our opinion that the university system should remain open to part-time studies, which primarily serve older students and are based on short programs. The universities' commitment to this student population is important.

In addition, given the increasingly rapid evolution of knowledge, universities face the challenge of updating the knowledge of their graduates by offering appropriate retraining and skill upgrading programs.

The preceding observations indicate that the challenge of accessibility must remain in the forefront of our concerns. Three aspects of the problem should be considered priorities:

- first, all those with the required aptitudes must have financial access to a university education;
- second, as far as possible, the geographical proximity of the university to the people and groups that want to use its services should be maintained;
- third, access to a degree should be improved in general. The universities should emphasize pedagogical support for students, while students should show more responsibility in this regard.

2. OECD, *Education at a Glance: OECD Indicators 1995* (OECD: Paris, 1995), p. 218. Ministère de l'Éducation, *Taxation and the Financing of Public Services. Making Choices Together. The Cost and Results of Education* (Québec: Les Publications du Québec, 1996), p.58.
3. Statistics Canada, 1996 Census, Nation Series, Cat. 93 F0028XDB96006.

3.2 PRIORITY

The following priority has been established regarding the maintenance and consolidation of accessibility:

Promote access to university and success in university studies by taking measures:

- to ensure, specifically by means of the Student Financial Assistance Program, that the economic obstacles to access to higher education are reduced to a minimum;
- to ensure geographical access to university education, particularly through the presence of universities throughout Québec and the development of distance education;
- to encourage students to remain in university, particularly by emphasizing support for undergraduates;
- at all levels of higher education, but particularly in graduate studies (master's and doctoral programs), to facilitate the integration of students into research and teaching.

To monitor access to university education, the Ministère will publish a set of annual indicators on university enrolments by level and sex, and on graduation rates by program.

4

THE UNIVERSITIES' *performance*

4 THE UNIVERSITIES' PERFORMANCE

When one seeks to define what constitutes a university's performance, certain questions come to mind. For example, what proportion of students obtain a degree? Is the teaching in a given institution as good as or superior to that in comparable universities? Is the research of an international calibre? Do the research activities have any spin-offs? Do the universities meet the needs of society? To what extent do they contribute to the development of society? Do they make optimal use of their human, material and financial resources? The concept of performance, particularly that of graduation rates, may be approached not only in quantitative, but also in more qualitative terms, such as the value added to a student by his or her university studies and degree.

In answer to these questions, it may be observed that over the past 30 years, Québec's universities have performed very well, as many indicators show. For example, they have been able to handle the growth of mass education, providing hundreds of thousands of students with an excellent education and have developed their research so as to make up for their initial delay and achieve international recognition.

In recent years, however, budget problems have made it more difficult for the universities to meet the demand for quality that we make of them. This is notwithstanding public support for higher education that places Québec in the front ranks of the OECD countries.

Now that the United States and Ontario, in particular, have begun to reinvest in higher education, we must ensure that our institutions have the resources necessary to maintain the achievements of recent years and compete effectively.

The universities' performance should be defined in terms of two key factors: quality and efficiency.

4.1 THE QUALITY OF EDUCATION AND RESEARCH

4.1.1 THE ISSUES

The issue of the quality of education involves a twofold objective: first, to provide students with an education that meets their needs and equips them with the tools they require in their personal, social and working lives; second, to give the universities the support they need to provide high-calibre teaching and research comparable to those of the best university-level institutions of other developed countries.

In order to attain these objectives, it is important to agree on the definition of a high-quality university education.

First of all, a quality education is an up-to-date education. The content of the programs and courses is up to date. It is on the cutting edge of knowledge and corresponds to the results of recent research. It is adaptable and is modified to keep pace with the evolution of knowledge. One cannot really speak of university education without taking into account the link between teaching and research. The specificity and meaning of a university education reside precisely in the integration of research and teaching in the university.

Second, a quality education is a relevant education, one that enables students to acquire the appropriate skills and tools for their personal development and the exercise of their role in society. This means that the content of the education includes elements suited to the needs of people who will soon enter the labour market and to the needs of society. Those needs are understood here in a broad sense and include general and cross-disciplinary needs, such as the development of critical thinking and education about the international situation, as well as more specific needs, such as the ability to use the new technologies or learning in a given specialty. The adaptation of the content of students' education is to be achieved in an open and interactive manner, in concert with the university's social partners, who explain what they need.

Third, a quality education is a lasting education. It must enable students to acquire the skills they need to enter the labour market, but at the same time, it must foster adaptability so that they are able to evolve in their working lives, which will be redefined over the years. The students must thus acquire the basic and specialized knowledge and technical skills particular to a field of study, but also general knowledge and work-related skills that will help them meet the challenges of a career in constant evolution.

Many factors contribute to the quality of education. We will mention here only those that are recognized as requiring immediate action: the resources available to provide competitive conditions for teaching and research and the mechanisms for evaluating programs.

In addition, the quality of teaching and research is, in large measure, a function of the presence of a critical mass of students and professors, which makes it possible to bring together the human and material resources and favours the numerous exchanges of views between students and professors that are a necessary part of education. Thus it is important to encourage the emergence and development of this critical mass. It is also true that the existence of a certain diversity among university-level institutions with regard to teaching and research helps maintain a balance in the educational offering and a healthy competition in the world of education.

The following resources seem most important for sustaining the quality of teaching and research:

- A faculty of high quality and adequate size to maintain the universities' standards in their particular areas of specialization and provide the student population with appropriate support. In addition to these absolute requirements, it should be noted that the presence of lecturers permits flexibility with regard to course offerings and facilitates the achievement of the appropriate balance between theory and practice.

- Material and technological resources (libraries, laboratories, art studios, scientific equipment, new information technologies, etc.) that meet the students' needs and fulfill the requirements of teaching and research in all areas of education.

- Clear institutional policies that provide adequate support for students, evaluation of program quality and a link between teaching and research.

The universities, the government and the various stakeholders must be able to count on effective program evaluation systems. Mechanisms for evaluating both existing programs and new programs have already been set up.

For the existing programs, each university has established an evaluation policy. Various professional and scientific bodies participate in the evaluation of programs. To ensure that the evaluation process is consistent from one university to another, evaluation practices are monitored by the Commission de vérification de l'évaluation des programmes, under the aegis of the Conférence des recteurs et des principaux des universités du Québec (CREPUQ).

New degree programs (bachelor's, master's and doctorate) are presented to CREPUQ's Commission de l'évaluation de la qualité des programmes and the Ministère de l'Éducation's Comité d'agrément des programmes de formation à l'enseignement and Comité des programmes, the latter of which decides on the appropriateness of creating new programs.

These mechanisms have been designed to evaluate each institution's programs. To answer questions concerning the complementarity and appropriateness of program offerings in the university system as a whole, the universities proposed the creation of the Commission des universités sur les programmes (CUP). Now that the CUP has completed its mandate, it is important to make sure that this focus on the whole system is maintained. Discussion of this issue should begin soon with all partners concerned.

The quality of education is inseparable from that of research. The issue of the funding and development of university research, particularly basic research, should thus be considered above all in terms of the integration of research into teaching. The specific contribution of university research, which cannot be made by any other type of institution, consists in the development of new knowledge and, especially, the higher education of citizens.

It is impossible to consider the mission and specificity of the universities without taking into account the link between teaching and research. This means that programs of study and research activities should be coordinated in such a way that the latter nourishes the former, as the Conseil supérieur de l'éducation has stressed. This coordination is the basis of the modern university and of the concept of professors' responsibilities. On the other hand, the intensity of the research conducted and, by the same token, its greater or lesser integration into instruction, may vary depending on whether a university offers a large number of master's and doctoral programs or concentrates more on undergraduate programs.

As a result, the link between teaching and research may sometimes target the education of a new generation of researchers (education in research), and sometimes target the integration into teaching of the methods and results of research (education through research), depending on the characteristics of each institution.

Research and creative activities thus complement teaching and, in this sense, are a vital part of the universities' mission. Maintaining and developing a solid research base that meets international standards of excellence can only contribute to the quality of the education a university gives its students, as well as to the emergence of new approaches and new findings that are indispensable to the development of human knowledge.

It must not be forgotten that the diversity of research enriches all areas of human activity. In this regard, certain research sectors, the social sciences and humanities for example, should continue to be developed and should have all the means necessary for their full development.

The universities' mission of education in research and through research entails two focuses: first, the education of the next generation of researchers; and second, the need to re-examine existing practices in both areas.

The present context is conducive to such a re-examination. More and more graduate students are demanding an education that will enable them to become something other than faculty members. Among other advantages, making graduate studies more relevant would help people with graduate degrees to enter the labour market. The objectives of graduate education should be reformulated as follows: to contribute to meet the demand for highly qualified personnel and to broaden the gamut of possible careers beyond those in the university. This is particularly applicable in the case of doctoral and postdoctoral education.

The second issue concerns particularly the maintenance and consolidation of the research base. The government intends to maintain its support for research freely conducted by university professors, because this remains the cornerstone of all research and innovation in our society. All agree that the reputation for excellence and the international standing achieved by Québec universities during the past 30 years should be consolidated in order to maintain Québec's competitive position in the global arena. Action is necessary in the area of human resources, to recruit young professor-researchers and keep high-level researchers, and in the area of material resources, regarding equipment, in order to maintain a critical mass of researchers, and to ensure their participation in local, national and international circuits of knowledge.

4.1.2 PRIORITIES

Two priorities have been established regarding the objectives for program and research quality.

Promote the quality of education by taking measures:

- to ensure the renewal, recruitment and retention of a body of high-quality professors;
- to modernize the basic equipment and infrastructures (librairies, studios, scientific and laboratory equipment, information technologies, etc.);
- to reinforce the links between program content and the competencies required to meet the needs of society;
- to reinforce the principal mechanisms for evaluating the quality of programs in order to ensure that they correspond to the evolution of knowledge and society, by seeing that stakeholders (associations, organizations of professionals or employers, etc.) are involved in evaluation.

To support the evaluation of education, the government and the universities must agree on a set of indicators on the evolution of factors that influence quality (for example, professor-student and professor-lecturer ratios and various aspects of the infrastructures for teaching and research such as librairies, laboratories and equipment associated with information technologies) and results (for example, graduation rates, student retention rates, job placement rates of graduates and the rankings of graduates in the competitions of professional orders, etc.). These indicators will be published annually.

Promote the quality of research by taking measures:

- to support a broad base of research–free and targeted, basic and applied;
- to ensure the presence of a critical mass of researchers in order to stimulate collaborative research efforts and make possible research activities of international calibre;
- to reinforce the links between teaching and research;
- to diversify, where necessary, the objectives of master's and doctoral education in order to meet the need for highly qualified personnel and prepare students for careers outside the universities;
- to better integrate students, especially those at the master's and doctoral level, into advanced research activities;
- to promote the education of the next generation of university researchers;
- to create conditions that encourage young researchers to remain here and to choose university careers;
- to create conditions that favour the recruitment and retention of career researchers in our universities;

All these matters are also relevant to the policy on science, which will define other priorities for government action to attain the objectives sought.

Certain related issues primarily concern the policy on science; these include the question of integrity in scientific research and that of government support for the modernization of research infrastructures. The policy on science will define the government's orientations and objectives regarding these points. The Ministère de l'Éducation will be actively involved in this process.

4.2 EFFICIENCY

4.2.1 THE ISSUES

The universities are large organizations with a considerable volume of resources and extremely complex management, at the level both of the individual institutions and of the whole system. As public resources are limited, maintaining an effective university system that is able to compete, particularly within North America, involves taking measures to ensure that the system makes optimal use of the resources at its disposal, while taking into account the particular mission of each institution.

The present configuration of the university system is a legacy of the past. No law or master plan shaped its development, as governments preferred to let diverse institutions develop autonomously.

Thus our university system includes institutions with various characteristics, even if they all share the same basic mission to create and disseminate knowledge—in other words, research and education. In practice, this mission is expressed in different ways, according to the resources and potential of each institution. This diversity makes it possible to offer the population a broad choice of programs and services. Some universities offer instruction in all disciplines and professions at every level of university education; there are specialized institutions like the École nationale d'administration publique (ÉNAP) or Télé-université (TÉLUQ); some universities have medical schools, while others are more oriented toward undergraduate education and still others are particularly active in research.

The presence of universities in all parts of Québec is another sign of the diversity of the university system. They directly serve the needs of the regional communities and participate actively in the social and economic development of the regions.

The diversity of the institutions enriches the system and gives it the flexibility to adapt to existing conditions: it offers definite advantages, and it is not being questioned. Nonetheless, it does involve some constraints. In the name of diversity, for example, we may expect to see some universities offering basic undergraduate programs, sometimes with low enrolments, and certain graduate programs in particular specialities, as well as conducting research in collaboration with other institutions; larger universities may offer a broader range of programs and more master's and doctoral programs. While all the universities must strive for excellence, none can offer all programs and services and excel in every discipline. Maintaining a diversified system requires constant choices, particularly regarding program offerings.

The programs and teaching activities are at the heart of the universities' mission. Students must be able to choose their education and to be sure that, whatever area of knowledge they choose, they will find at the university the tools necessary to meet their basic personal needs and satisfy the requirements of a modern society. Although no concessions may be made concerning the quality of the programs, rational management of the program offerings is essential. Without it, the state cannot increase its contribution to the funding and development of the universities. In the sectors of education where economies of scale are possible, it is expected that each institution, while fully respecting its mission, will take the measures required to achieve such economies. Briefly, universities should have three concerns as regards the programs they offer: to strive for quality, to make optimal use of resources and to avoid putting undue strain on the financial resources of society.

In this connection it is important to underline the advantages of cooperative efforts that contribute to the quality of education and the relevance of research; they may, in some cases, permit major savings. Cooperation is essential first of all within each institution, to minimize costly duplications if any remain, and then among universities, where there is a great deal to be done, and finally, beyond our university system, with the CEGEPs and the various economic and social institutions.

Coordination between the universities and CEGEPs is especially important, to further integrate not only pre-university and university education, but also technical and university education, and to establish advantageous forms of collaboration between the two educational levels.

4.2.2 PRIORITIES

Two priorities for action have been established regarding the objective of efficiency:

Encourage the institutions to manage their program offering rationally by taking measures:

- to ensure that the institutions and their partners establish procedures for regular review of their program offerings, including short programs, with the objective of encouraging excellence, better meeting individual and social needs and optimizing their resource utilization;

- to offer financial support to institutions that make efforts to rationalize their program offerings, particularly when their efforts involve agreements between institutions.

Increase the efficiency of the university system by taking measures:

- to support the efforts of universities with major structural deficits to re-establish their financial equilibrium and demonstrate efficient management, including the management of their program offerings;

- to support institutions that share resources;

- to favour close cooperation and coordination among institutions, particularly with respect to their program and course offerings, and between university-level institutions and other educational institutions, particularly CEGEPs. The orientations of the policy on science will define the measures to be taken with respect to research activities;

- to support, where necessary, institutions that reach cooperation or service agreements with businesses or social groups that contribute to the fulfilment of the universities' mission;

- to encourage the recognition of prior education (sanctioned by credits) from one university institution to another;

- to establish guidelines for the use of off-campus service centres in order to favour the optimal utilization of existing facilities;

- to carry out an in-depth review of the universities' short programs in relation to those offered by the CEGEPs, in order to ensure complementarity, respect for the specific missions of universities and CEGEPs and economical resource use in the education system.

To monitor management in each institution and at the level of the university system, the government intends to establish, with the universities, a set of indicators bearing on all aspects of their management. In addition, indicators defined in collaboration with the institutions and suited to the characteristics of each institution will make it possible to take into account their specific features. By way of example, indicators concerning the management of the program offering might include enrolments, unit costs, performance and, if appropriate, the relevance of the programs offered to the needs of the labour market. In addition, the indicators should accord an appropriate place to the territorial distribution of the universities' activities.

The policy on science will also define indicators concerning university research.

To achieve better monitoring of management, mechanisms for accountability will be needed, and they will have to be revised to make them more effective, more accessible to the population and better coordinated in relation to each other.

5

MEETING THE NEEDS OF SOCIETY AND BEING OPEN TO *the world*

5

MEETING THE NEEDS OF SOCIETY AND BEING OPEN TO THE WORLD

5.1 THE ISSUES

It is largely by creating the conditions necessary to respond rapidly and effectively to the educational needs of individuals and the needs of society for highly qualified personnel and new knowledge that Québec will carve out a place for itself in the knowledge society and create a context that fosters innovation on all fronts.

By virtue of their mission and the services they offer, the universities have the principal responsibility for meeting expectations they themselves perceive or needs formulated by stakeholders in society. As producers and disseminators of knowledge, they play a major role in the process of cultural, social and economic innovation.

The knowledge society is based on the interaction of a multitude of actors and on the exchange of knowledge. Innovation is essentially a result of this interaction. The dynamic created by the emergence of the knowledge society began gradually. For some years it has been accelerating and growing stronger. The evolving global economic context has led various stakeholders to demand more from the universities. This has produced tensions, which sometimes have a creative effect but may also hamper fulfilment of the universities' traditional mission.

This situation has obliged the universities to adapt rapidly, with the result that they have not always been able to reaffirm their essential role, which is the comprehensive education of individuals as compared with their specific contribution to meeting the needs of society. Similarly, they have not been able to work out all the terms of the new contract that is emerging between them and society. As a result, stakeholders are seeking new modes of collaboration, as evidenced by the debates concerning ethics and integrity in research, intellectual property rights to the work and products of research done in partnership—subjects to be dealt with specifically by the policy on science—and criticism of weaknesses in university education.

The problem is far from resolved and the principal challenge remains the search for an equilibrium between the fundamental aspects of university activity and certain more immediate and specific needs of society.

Whatever the tensions, one thing is certain: the university is destined to become an increasingly open system, in interaction with its surroundings. Consequently, it seems clear that the universities' ability to meet the needs of society and their contribution to cultural, social and economic innovation must be supported and reinforced. As this new role is still in its early development, we must be more innovative than ever before, to keep pace with this process. The key concepts to underscore here are: adaptation, pro-activity, innovation, partnership and dissemination and uptake of knowledge.

Partnership is a particularly effective way to ensure the relevance of teaching and research and to develop the local and international networks to promote that research. This is also the case with regard to securing recognition and jobs for young graduates.

Four main areas require attention if we are to improve the universities' ability to meet the needs of society: research, the training of highly qualified personnel and the next generation of researchers, the integration of university graduates into the labour market and internationalization.

The universities have made a major strategic contribution to Québec's overall research effort. In 1995, university research expenditures with funding from a variety of sources, totalled $853 million, which represents one quarter of all spending on research and development in Québec. The enormous potential of university research to contribute to social, cultural and industrial innovation should be recognized and harnessed.

Although public funding of university research should continue to predominate, a growing proportion of research is being done in partnership with the private sector. This increase in private funding in universities confirms that the trend towards close cooperation with

business is well established. It is primarily the natural sciences, engineering and the health sciences that have benefitted from the measures introduced in the last 20 years. These disciplines are also most closely associated with the technological and economic development of society.

However, in order to develop and promote expertise in all the areas required by the knowledge society, we must also make full use of the capacity of the arts, the humanities and the social sciences to help solve social problems and foster cultural development.

The challenge of making optimal use of university research in the knowledge society consists mainly in implementing measures to promote research in partnership, either among researchers from various disciplines or with partners from outside the university, reinforcing measures designed to transfer knowledge, taking specific action to enhance the contribution of the arts, the social sciences and the humanities and, finally, supporting the development of research topics of strategic importance for our society.

Regarding the education of highly qualified personnel, the university system should be able to offer students programs in areas for which there is strong labour market demand. It must not be forgotten, however, that such demand may turn out to be temporary, and that, in the longer term, the system's true capacity to adapt will always depend on its offering education in a broad range of areas. It is evident that society needs professionals in all areas of knowledge, even though, at a given moment, there is more demand for certain sectors than others. Incentives should be offered to ensure that the most immediate needs are met. For the time being, the demand is greatest for graduates with master's and doctoral degrees and those in the scientific and technological sectors.

Thus, although there has been improvement in terms of enrolments and completion of graduate degrees, some research, such as that of the Conseil de la science et de la technologie, stresses that Quebecers are still underrepresented in programs leading to graduate degrees and in the technical and scientific sectors and, in addition, that their retention rate is still too low.

By way of example, in 1997, only 21.4 percent of university degrees granted in Québec were in engineering, architecture, natural sciences, mathematics and computer science, whereas the corresponding proportion in the OECD countries was 26 percent. The proportion of graduates in engineering, science, mathematics and computer science has been declining for the past seven years. In addition, it should be emphasized that although women have a higher graduation rate than men, they hold only 32.2 percent of the degrees granted in these areas. In a society that seeks highly qualified personnel, this trend is certainly disquieting.

Students are a dynamic force society needs. This means that they should be encouraged to consider themselves full-fledged members of a society that values their contribution.

Students should also be made to see themselves as active, productive members of society. They bring to the labour market knowledge acquired in university, which makes them genuine agents of the transfer of knowledge. They act as front-line ambassadors for the universities. In order to develop a positive image of their role and of the place that society reserves for them, they need to be able to count on effective assistance in making their career choice or finding employment.

Measures to facilitate the mobility of students during their education and to help them make a successful transition from student life to working life should be encouraged.

The internationalization of university activities reflects the global character of the acquisition and dissemination of knowledge. The universities' participation in the creation of increasingly global networks for the exchange of knowledge and their welcoming of foreign students demonstrate their openness to the world. At the same time, globalization has had a considerable impact on several areas of university activity, such as program content, research activities, students' and professors' mobility and the granting of degrees comparable with degrees granted elsewhere. In this connection, it is important to encourage, promote and support the national and international activities of professors who exchange and transfer knowledge, to increase the number of foreign students and to interest our students in the international scene.

5.2 PRIORITIES

Four priorities for action have been established to enable the university to meet the needs of society and to help students play their role fully:

Educate highly qualified personnel and a solid new generation of researchers by taking measures:

- to encourage student participation in all areas of university education and increase the proportion of students obtaining a bachelor's degree;
- to offer education to update knowledge, including technological updating, primarily by means of short programs;
- to develop programs in fields in which the demand is strongest;
- to increase the number of students in sectors with an existing or anticipated labour shortage (for example, in the teaching of mathematics and the sciences);
- to increase the number of students in master's and, especially, doctoral, programs.

Increase the universities' capacity to meet the needs of society by taking measures:

- to increase the interaction between the universities and the various stakeholders;
- to encourage the universities to explore and develop new mechanisms to ensure that their expertise serves society and to exchange knowledge with society;
- to encourage the institutions to participate in joint activities, particularly those concerning the education of highly qualified personnel;
- to grant the universities' partners a larger role in the planning and evaluation of university activities;
- to support the universities' efforts to contribute to the vitality of their community;
- to promote Québec's universities and researchers internationally;
- to increase students' awareness of the international arena, and encourage them to obtain part of their education abroad;
- to increase the number of foreign students.

Promote research related to social, economic and cultural development by taking measures:

- to increase the contribution of research to the identification and solution of social, economic and cultural problems;
- to increase reliance on research partnerships and mechanisms linking the universities and the economic, social and cultural milieu;
- to increase the transfer of knowledge and the use of research results, including those in the social sciences, the humanities and the arts;
- to encourage research in areas of strategic importance for the future of Québec;
- to find solutions to the problems concerning intellectual property and the circulation of knowledge when research is undertaken in partnerships, especially those with the private sector.

This priority concerns primarily the policy on science, which will define the government's orientations and priorities in this connection.

Adopt strategies to help graduates enter the workforce by taking measures:

- to support the universities' efforts to promote and support student mobility, including international mobility;

- to support educational and vocational guidance for students, both prior to university and in university;
- to improve the effectiveness of instruments to measure students' integration into the labour market;
- to encourage the universities to explore and develop new mechanisms to facilitate the integration of graduates into the labour market (for example, bursaries for practicums in the workplace that would count for credit, cooperative education programs, virtual businesses).

CONCLUSION

In issuing this policy statement, the government is taking the opportunity to reaffirm the importance of the university for a society that aspires to remain in the forefront of developed countries. In Québec, as elsewhere in the world, universities play an important social role: they foster development by contributing to the emergence of new knowledge. A progressive society is based on knowledge, which is why close cooperation between the universities and the various stakeholders in society is essential.

In this context, for the universities to fully play the role that they alone are able to play, they must participate in an open, attentive dialogue with both the government and the stakeholders who formulate expectations concerning them. This dialogue must be based on a shared understanding of the issues concerning the university. Such understanding is the only viable basis for making crucial choices. In its absence, the actions undertaken are likely to work at cross purposes instead of creating synergy.

By helping all involved to focus their attention and their efforts on the challenges ahead, and by encouraging the university to see itself in a new light and to reconsider its approaches in order to play its role more effectively, we help it to secure the place it should hold as Québec prepares for the future. Certainly, the situation of the public finances obliges the government to weigh the impact of its decisions and that of the sums it invests to maintain effective public services. But if a consensus can emerge from discussions among all those who have an interest in seeing the university fulfill its mission, and if this can expedite Québec's entry into the knowledge society, we may infer that an investment in the universities is an investment in our collective future.

Major objectives require commensurate means. Reinvestment in the universities will take into account the wealth of society and the government's responsibility to exercise good management. The government's allocation of public money to the universities will be based on the orientations defined in this policy statement and in the policy on science. In addition, its decisions will be based on rational management of its resources and of the services provided. This management should foster cooperation and transparency. In any case, accountability for the results attained, in both quality of services and utilization of resources, will be an absolute requirement.

Precisely because they are so diverse and each one is unique, Québec's universities are able to enlist their respective specificities in the service of the university system and society. This does not entail limiting the autonomy of the institutions; on the contrary, reinvesting rationally and equitably in the university system will enhance the effectiveness and uniqueness of each institution. By working together with a common will, the universities, their communities, the government and the stakeholders will help strengthen Québec's identity and affirm its presence on the international scene, where roles are being redefined. What tomorrow will bring depends on what we put into today.